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L24: Entry 2 of 4

File: JPAB

Nov 14, 1989

PUB-NO: JP401282696A  
DOCUMENT-IDENTIFIER: JP 01282696 A  
TITLE: METER WITH FUEL OIL PREPAID CARD PROCESSOR

PUBN-DATE: November 14, 1989

## INVENTOR-INFORMATION:

NAME	COUNTRY
SUEKANE, HIROMASA	

## ASSIGNEE-INFORMATION:

NAME	COUNTRY
SUEKANE HIROMASA	N/A

APPL-NO: JP63113992

APPL-DATE: May 10, 1988

US-CL-CURRENT: 194/208INT-CL (IPC): G07F 7/08; B67D 5/14

## ABSTRACT:

PURPOSE: To omit to exchange troublesome cash and change by purchasing a fuel oil such as gasoline from a gas station with the use of a card purchased from a gas station beforehand.

CONSTITUTION: A magnetic head part 110 reads and writes the residual frequency information of a fuel oil prepaid card, a data accumulating part 103 inputs the read residual frequency information and the unit price of the gasoline, and a gasoline information input device 160 inputs a gasoline sales quantity. A central processor 120 operates the selling price and the new residual frequency from the gasoline sales quantity, the unit price and the residual frequency information, and displays the gasoline sales quantity and the residual frequency on a display device 130. In addition, a punching device 111 punches a hole at a card position corresponding to the new frequency. Thus, the trouble to exchange the cash and the change can be omitted.

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2/9/20 (Item 8 from file: 148)  
DIALOG(R) File 148: Gale Group Trade & Industry DB  
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09402394 SUPPLIER NUMBER: 19277535 (THIS IS THE FULL TEXT)  
Buying gas at the pump no longer requires a card or cash; tiny computer chip in keychain communications with gas pumps from a distance.  
Business Wire, p4040100

April 4, 1997

LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 392 LINE COUNT: 00039

TEXT:

GREENSBORO, N.C.--(BUSINESS WIRE)--April 4, 1997-- Gilbarco Inc. announced today plans to develop an automated authorization system for fuel dispensers using the MicroStamp(TM) technology fro Micron Communications, Inc., (NYSE:MU) based in Boise, Idaho.

The new technology speeds the fueling process by eliminating the need to fumble for a card or cash, swipe a card, or use a keypad. Instead, a tiny computer chip and antenna mounted in a postage stamp-sized keychain communicates with the gas pump from a distance using radio waves. The customer is identified and the pump is authorized automatically.

The new system will be created by combining Gilbarco's expertise in fuel dispenser automation with Micron Communications' innovative MicroStamp remote intelligent communications (RIC) technology. Once developed, Gilbarco will distribute the system as a factory installed option or upgrade retrofit kit for their dispensers under the TRIND(TM) (Transmitter /Receiver in Dispenser ) trademark.

Shell Oil Products Company is working in conjunction with Gilbarco and Micron Communications and plans on introducing the new technology, which Shell will call Shell EASY PAY, into two test markets this summer.

"We believe that MicroStamp is the ideal technology for creating new and innovative pump and dispenser applications" said Craig Hartsell, Jr., Manager of Product Development for Gilbarco. "Gilbarco intends to make this technology available to the entire retail petroleum industry and expects it to become the standard for fuel dispenser applications."

Gilbarco, headquartered in Greensboro, North Carolina is a manufacturer of fuel dispensers and service station automation equipment with affiliated manufacturing facilities worldwide. Gilbarco's The Advantage(R) dispenser series with CRIND(TM) (Card Reader in Dispenser and G-SITE(TM) POS systems have set industry standards for service station automation and customer convenience.

Micron Communications is developing remote intelligent communications (RIC) technology marketed under the "MicroStamp" brand name. RIC technology offers wireless data communications capability for asset tracking, enhanced security systems, automatic vehicle identification, remote smart card technology and other applications. Micron Communications Inc. is a subsidiary of Micron Technology Inc., whose common stock is traded on the New York Stock Exchange Inc. (NYSE) under the symbol MU. For more information about Micron Communications, please visit its web site at [www.microncommunications.com](http://www.microncommunications.com) .

CONTACT: Gilbarco Inc.

Craig Hartsell, 910/547-5000 x5721

[www.gilbarco.com](http://www.gilbarco.com)

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COMPANY NAMES: Bilbarco Inc.--Contracts; Micron Communications Inc.-- Contracts; Shell Oil Products Co.--Contracts

INDUSTRY CODES/NAMES: BUS Business, General; BUSN Any type of business

DESCRIPTORS: Service stations (Motor vehicles)--Contracts

PRODUCT/INDUSTRY NAMES: 3586000 (Measuring & Dispensing Pumps)

SIC CODES: 3586 Measuring and dispensing pumps

FILE SEGMENT: NW File 649

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Terms	Documents
14 and 19	7

**Database:**

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- JPO Abstracts Database
- EPO Abstracts Database
- Derwent World Patents Index
- IBM Technical Disclosure Bulletins

14 and 19

[Refine Search:](#)[Clear](#)**Search History****Today's Date: 2/27/2001**

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
USPT,JPAB,EPAB,DWPI,TDBD	I4 and I9	7	L10 (display from Scanned title, key all)
USPT,JPAB,EPAB,DWPI,TDBD	((705/\$)!..CCLS.)	7769	L9 (Scanned title, key all)
USPT,JPAB,EPAB,DWPI,TDBD	I4 and I7	44	L8
USPT,JPAB,EPAB,DWPI,TDBD	((340/\$)!..CCLS.)	99539	L7 (Scanned title, key all)
USPT,JPAB,EPAB,DWPI,TDBD	I4 and @ay<=1995	157	L6 (Scanned title, key all)
USPT,JPAB,EPAB,DWPI,TDBD	I4 and @ay<=1995	157	L5
USPT,JPAB,EPAB,DWPI,TDBD	I1 and I2 and I3	243	L4
USPT,JPAB,EPAB,DWPI,TDBD	(transponder\$ or transmitter\$ or receiver\$ or antenna\$ or tag\$1 or card\$ or passcard\$) same (fuel or gaz or gas or gazoline\$ or petrol or fillup\$ or pump\$)	38932	L3
USPT,JPAB,EPAB,DWPI,TDBD	(range or close\$ or near\$ or distance or vicinity) adj5 (detect\$ or identif\$)	81294	L2
USPT,JPAB,EPAB,DWPI,TDBD	(dispens\$ or gaz or gas or gazoline\$ or fuel\$) same (RF or frequenc\$ or electromagnetic\$1)	95789	L1

ile 348:EUROPEAN PATENTS 1978-2000/Feb W02  
(c) 2001 European Patent Office  
File 349:PCT Fulltext 1983-2001/UB=20010215, UT=20010201  
(c) 2001 WIPO/MicroPat

2/21/01

Set	Items	Description
S1	869368	(RANGE? ? OR REACH? OR NEAR? OR NEARBY OR CLOSE OR CLOSEBY OR PROXIMITY OR DISTANCE? ? OR VICINIT??? OR (WITHIN OR IN) (1- W) (NEIGHBORHOOD OR AREA? ?) OR VIEW OR SCOPE)
S2	12098	(GAS OR GASOLINE OR PETROL OR FUEL? OR DIESEL OR FILLUP OR FILL? () UP) (3N) (STATION? ? OR ISLAND? ? OR PUMP? ? OR DISPENS? OR DEPOT? ?)
S3	511716	CAR? ? OR AUTO? ? OR AUTOMOBILE? ? OR VEHICLE? ? OR TRUCK? ? OR BUS?? OR VAN?? OR DRIVER? ?
S4	487048	TRANSPOUNDER? ? OR TRANSMITTER? ? OR RECEIVER? ? OR ANTENNA- ? OR TAG? ? OR CARD? ? OR SMARTCARD? ? OR TERMINAL? ? OR RE- ADER? ? OR SENSOR? ? OR HANDHELD? ? OR HAND()HELD? ? OR WIREL- ESS? ? OR MOBILE? ?
S5	277247	S1(3N) (INDICAT? OR SHOW? OR DETERMIN? OR DETECT? OR SENS? - OR IDENTIF? OR CALCULAT? OR COMPUTE OR COMPUTES OR COMPUTED OR COMPUTING OR ESTIMAT? OR GAUG? OR MEASUR?)
S6	91	S5(3N) S2
S7	3	S6(3N) S3:S4 ( <i>Kwic, all</i> )
S8	2	S6(3N) (CUSTOMER? ? OR CONSUMER? ? OR PERSON? ?) ( <i>Kwic, abstract</i> )
S9	137038	(TRANSPOUNDER? ? OR ANTENNA??? OR RECEIVER? ? OR TRANSMITTE- R? ? OR RADIO() FREQUENC??? OR RF OR RADIO() WAVE? ?)
S10	14021	S1(3N) S9
S11	7	S2(3N) S10
S12	31504	S1(3N) FREQUENC???
S13	17	S2(S) S12 NOT S11
S14	60	S2/TI, AB, CM AND S10
S15	54	S14 NOT S11
S16	5	S14 AND IC=G06F ( <i>Scanned title</i> )
S17	1	S6 AND IC=G06F
S18	561	S1(3N) S2
S19	49	S18(3N) S3:S4
S20	12	S18 AND IC=G06F
S21	8	AU="GIORDANO JOSEPH":AU="GIORDANO JOSEPH AUGUST" ( <i>Scanned title</i> )
	?	

File 347:JAPIO Oct 1976-2000/Jul (UPDATED 001114)

(c) 2000 JPO & JAPIO

File 350:Derwent WPIX 1963-2000/UD,UM &UP=200110

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Set	Items	Description
S1	2464443	(RANGE? ? OR REACH? OR NEAR? OR NEARBY OR CLOSE OR CLOSEBY OR PROXIMITY OR DISTANCE? ? OR VICINIT??? OR (WITHIN OR IN) (1- W) (NEIGHBORHOOD OR AREA? ?) OR VIEW OR SCOPE)
S2	4414870	INDICAT? OR SHOW? OR DETERMIN? OR DETECT? OR SENS? OR IDEN- TIF? OR CALCULAT? OR COMPUTE OR COMPUTES OR COMPUTED OR COMPU- TING OR ESTIMAT? OR GAUG? OR MEASUR?
S3	35767	(GAS OR GASOLINE OR PETROL OR FUEL? OR DIESEL OR FILLUP OR FILL? ()UP) (3N) (STATION? ? OR ISLAND? ? OR PUMP? ? OR DISPENS? OR DEPOT? ?)
S4	1557687	CAR? ? OR AUTO? ? OR AUTOMOBILE? ? OR VEHICLE? ? OR TRUCK? ? OR BUS?? OR VAN?? OR DRIVER? ?
S5	1917149	TRANSPONDER? ? OR TRANSMITTER? ? OR RECEIVER? ? OR ANTENNA- ??? OR TAG? ? OR CARD? ? OR SMARTCARD? ? OR TERMINAL? ? OR RE- ADER? ? OR SENSOR? ? OR HANDHELD? ? OR HAND()HELD? ? OR WIREL- ESS? ? OR MOBILE? ?
S6	461402	S1(3N)S2
S7	125	S6(3N)S3
S8	2	S7(3N)S4 <i>(scanned title)</i>
S9	7	S7(3N)S5
S10	5	S9 NOT S8 <i>(Reviewed title)</i>
S11	0	S7(3N) (CUSTOMER? ? OR CONSUMER? ? OR PERSON? ?)
S12	2252673	(RADIO OR HIGH) () FREQUENC??? OR RF OR SIGNAL? ? OR FREQUEN- C???
S13	75093	S1(3N)S12
S14	11	S13(10N)S3
S15	670194	STATION? ? OR ISLAND? ? OR PUMP? ? OR DISPENS? OR DEPOT? ?
S16	4	S7 AND IC=G06F <i>(Scanned file)</i>
S17	482377	TRANSPONDER? ? OR ANTENNA??? OR RECEIVER? ? OR TRANSMITTE- R? ? OR RADIO()FREQUENC??? OR RF)
S18	54	S3(3N)S17
S19	1	S1(5N)S18 <i>(Reviewed abstract)</i>
S20	11685	S1(3N)S17
S21	10	S3 AND S20 <i>(Scanned title)</i>
S22	37803	S1(3N) FREQUENC???
S23	26	(S3 AND S22) NOT S21 <i>(Scanned title)</i>
S24	27	AU="GIORDANO J":AU="GIORDANO J A" OR AU="GIORDANO JOSEPH"
S25	2	S3 AND S24

File 15:ABI/Inform(R) 1971-2001/Feb 21  
(c) 2001 Bell & Howell  
File 275:Gale Group Computer DB(TM) 1983-2001/Feb 21  
(c) 2001 The Gale Group  
File 16:Gale Group PROMT(R) 1990-2001/Feb 21  
(c) 2001 The Gale Group  
File 160:Gale Group PROMT(R) 1972-1989  
(c) 1999 The Gale Group  
File 148:Gale Group Trade & Industry DB 1976-2001/Feb 21  
(c) 2001 The Gale Group

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Set	Items	Description
S1	6366587	(RANGE? ? OR REACH? OR NEAR? OR NEARBY OR CLOSE OR CLOSEBY OR PROXIMITY OR DISTANCE? ? OR VICINIT??? OR (WITHIN OR IN) (1- W) (NEIGHBORHOOD OR AREA? ?) OR VIEW OR SCOPE)
S2	213235	S1(3N) (INDICAT? OR SHOW? OR DETERMIN? OR DETECT? OR SENS? - OR IDENTIF? OR CALCULAT? OR COMPUTE OR COMPUTES OR COMPUTED OR COMPUTING OR ESTIMAT? OR GAUG? OR MEASUR?)
S3	63901	(GAS OR GASOLINE OR PETROL OR FUEL? OR DIESEL OR FILLUP OR FILL? () UP) (3N) (STATION? ? OR ISLAND? ? OR PUMP? ? OR DISPENS? OR DEPOT? ?)
S4	14332030	CAR? ? OR AUTO? ? OR AUTOMOBILE? ? OR VEHICLE? ? OR TRUCK? ? OR BUS?? OR VAN?? OR DRIVER? ?
S5	2567215	TRANSPOUNDER? ? OR TRANSMITTER? ? OR RECEIVER? ? OR ANTENNA- ??? OR TAG? ? OR CARD? ? OR SMARTCARD? ? OR TERMINAL? ? OR RE- ADER? ? OR SENSOR? ? OR HANDHELD? ? OR HAND()HELD? ? OR WIREL- ESS? ? OR MOBILE? ?
S6	23	S2(3N)S3
S7	19	RD (unique items) (scanned title)
S8	1858	S1(3N)S3
S9	91	S8(3N)S4
S10	73	RD (unique items)
S11	32	S10 NOT PY=1996:2001
S12	31	S11 NOT S7
S13	18	S8(3N)S5
S14	15	RD (unique items)
S15	279656	(TRANSPOUNDER? ? OR ANTENNA??? OR RECEIVER? ? OR TRANSMITTE- R? ? OR RADIO()FREQUENC??? OR RF OR RADIO()WAVE? ?)
S16	10165	S1(3N)S15
S17	26	S16(S)S3
S18	15	RD (unique items) (reviewed all)
S19	20492	S1(3N)FREQUENC???
S20	11	S3(S)S19
S21	9	RD (unique items) (scanned title)

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File 9:Business & Industry(R) Jul/1994-2001/Feb 21  
 (c) 2001 Resp. DB Svcs.  
 File 623:Business Week 1985-2001/Feb W3  
 (c) 2001 The McGraw-Hill Companies Inc  
 File 810:Business Wire 1986-1999/Feb 28  
 (c) 1999 Business Wire  
 File 624:McGraw-Hill Publications 1985-2001/Feb 21  
 (c) 2001 McGraw-Hill Co. Inc  
 File 813:PR Newswire 1987-1999/Apr 30  
 (c) 1999 PR Newswire Association Inc  
 File 636:Gale Group Newsletter DB(TM) 1987-2001/Feb 21  
 (c) 2001 The Gale Group  
 File 621:Gale Group New Prod.Annou.(R) 1985-2001/Feb 21  
 (c) 2001 The Gale Group  
 File 20:World Reporter 1997-2001/Feb 22  
 (c) 2001 The Dialog Corporation  
 File 634:San Jose Mercury Jun 1985-2001/Feb 18  
 (c) 2001 San Jose Mercury News

Set	Items	Description
S1	7908908	(RANGE? ? OR REACH? OR NEAR? OR NEARBY OR CLOSE OR CLOSEBY OR PROXIMITY OR DISTANCE? ? OR VICINIT??? OR (WITHIN OR IN) (1- W) (NEIGHBORHOOD OR AREA? ?) OR VIEW OR SCOPE)
S2	184245	S1(3N) (INDICAT? OR SHOW? OR DETERMIN? OR DETECT? OR SENS? - OR IDENTIF? OR CALCULAT? OR COMPUTE OR COMPUTES OR COMPUTED OR COMPUTING OR ESTIMAT? OR GAUG? OR MEASUR?)
S3	88069	(GAS OR GASOLINE OR PETROL OR FUEL? OR DIESEL OR FILLUP OR FILL?()UP) (3N) (STATION? ? OR ISLAND? ? OR PUMP? ? OR DISPENS? OR DEPOT? ?)
S4	8507074	CAR? ? OR AUTO? ? OR AUTOMOBILE? ? OR VEHICLE? ? OR TRUCK? ? OR BUS?? OR VAN?? OR DRIVER? ?
S5	2565921	TRANSPOUNDER? ? OR TRANSMITTER? ? OR RECEIVER? ? OR ANTENNA- ??? OR TAG? ? OR CARD? ? OR SMARTCARD? ? OR TERMINAL? ? OR RE- ADER? ? OR SENSOR? ? OR HANDHELD? ? OR HAND()HELD? ? OR WIREL- ESS? ? OR MOBILE? ?
S6	31	S2(3N)S3
S7	28	RD (unique items)
S8	8	S7 NOT PY=1997:2001
S9	3169	S1(3N)S3 ( <i>scanned title</i> )
S10	24	S9(3N)S5 ( <i>scanned title</i> )
S11	5	S10 NOT PY=1997:2001
S12	287409	(TRANSPOUNDER? ? OR ANTENNA??? OR RECEIVER? ? OR TRANSMITTE- R? ? OR RADIO()FREQUENC??? OR RF OR RADIO()WAVE? ?)
S13	8013	S1(3N)S12
S14	15	S3(3N)S13
S15	6	RD (unique items) ( <i>scanned title, KUIC</i> )
S16	11286	S1(3N)FREQUENC???
S17	4	S3(3N)S16

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File 238:Abs. in New Tech & Eng. 1981-2001/Feb  
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 File 108:AEROSPACE DBASE 1962-2001/FEB  
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 File 8:Ei Compendex(R) 1970-2001/Feb W1  
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 File 111:TGG Natl. Newspaper Index(SM) 1979-2001/Feb 16  
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 File 603:Newspaper Abstracts 1984-1988  
 (c) 1999 Bell & Howell  
 File 483:Newspaper Abstracts Daily 1986-2001/Feb 21  
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 File 6:NTIS 1964-2001/Mar W1  
 Comp&distr 2000 NTIS, Intl Cpyrht All Right  
 File 144:Pascal 1973-2001/Feb W2  
 (c) 2001 INIST/CNRS  
 File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
 (c) 1998 Inst for Sci Info  
 File 34:SciSearch(R) Cited Ref Sci 1990-2001/Feb W3  
 (c) 2001 Inst for Sci Info  
 File 99:Wilson Appl. Sci & Tech Abs 1983-2001/Jan  
 (c) 2001 The HW Wilson Co.  
 File 583:Gale Group Globalbase(TM) 1986-2001/Feb 22  
 (c) 2001 The Gale Group

Set	Items	Description
S1	7243401	(RANGE? ? OR REACH? OR NEAR? OR NEARBY OR CLOSE OR CLOSEBY OR PROXIMITY OR DISTANCE? ? OR VICINIT??? OR (WITHIN OR IN) (1- W) (NEIGHBORHOOD OR AREA? ?) OR VIEW OR SCOPE)
S2	552771	S1(3N) (INDICAT? OR SHOW? OR DETERMIN? OR DETECT? OR SENS? - OR IDENTIF? OR CALCULAT? OR COMPUTE OR COMPUTES OR COMPUTED OR COMPUTING OR ESTIMAT? OR GAUG? OR MEASUR?)
S3	37026	(GAS OR GASOLINE OR PETROL OR FUEL? OR DIESEL OR FILLUP OR FILL?()UP) (3N) (STATION? ? OR ISLAND? ? OR PUMP? ? OR DISPENS? OR DEPOT? ?)
S4	3055001	CAR? ? OR AUTO? ? OR AUTOMOBILE? ? OR VEHICLE? ? OR TRUCK? ? OR BUS?? OR VAN?? OR DRIVER? ?
S5	2444428	TRANSPOUNDER? ? OR TRANSMITTER? ? OR RECEIVER? ? OR ANTENNA- ??? OR TAG? ? OR CARD? ? OR SMARTCARD? ? OR TERMINAL? ? OR RE- ADER? ? OR SENSOR? ? OR HANDHELD? ? OR HAND()HELD? ? OR WIREL- ESS? ? OR MOBILE? ?
S6	9	S2(3N)S3 ( <i>scanned title</i> )
S7	700	S1(3N)S3
S8	29	S7(3N)S4:S5
S9	13	S8 NOT PY=1997:2001 ( <i>scanned title</i> )
S10	792852	(TRANSPOUNDER? ? OR ANTENNA??? OR RECEIVER? ? OR TRANSMITTE- R? ? OR RADIO()FREQUENC??? OR RF OR RADIO()WAVE? ?)
S11	24445	S1(3N)S10
S12	5	S3 AND S11
S13	159941	S1(3N)FREQUENC???